Postcards Encourage Participant Updates

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Report No. 08-06

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cycles, this could lead to an increase in daughters born.[6] However, studies using larger data sets are needed before we can conclude that long menstrual cycles are related to offspring sex ratio.

ACKNOWLEDGMENT

I thank Thomas Lilley, Tuula Salmi, and Liisa Lindberg for their help collecting the data.

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Postcards Encourage Participant Updates

To the Editor:

Participant retention is vital to the success of a longitudinal cohort study. Investigators may attempt to bolster retention rates by developing techniques to maintain up-to-date contact information, and foster participants' perception of the importance of the research and their dedication to the study.[1] Studies have used various approaches to retain cohort participants, including mailing reminders through the US Postal Service tracking programs, providing incentives for participation, maintaining open communication via a study web site or toll-free phone line, and telephone reminders.[2–4] Maintenance of reliable address information in mobile populations[3,5] may require contacting participants at regular time intervals.[4] Previous studies have shown that sending postcards to participants is an effective method of retention. Regular contact not only develops participant identification with the cohort, but also encourages participants to update any changes to their contact information.[4]

The Millennium Cohort Study was designed in the late 1990s in response to US Department of Defense, Congressional, and Institute of Medicine recommendations for coordinated epidemiologic research to determine how military service affects long-term health.[6,7] Launched in 2001, this 22-year longitudinal study surveys participants every 3 years, and a postcard and an electronic mail message are sent to cohort members on Memorial and Veterans day to honor their military service, and to thank them for their continued participation in the study. Members are reminded of the web site where they may obtain information on study progress and findings, contact the study team, and update their contact information (mailing address, e-mail address, phone number, or name). Specially designed postcards with the study logo and personal signature of the principal investigator provide study recognition and encourage a sense of membership in the cohort. The purpose of this study was to determine whether semiannual e-mails and postcards encourage participants to update their contact information.

Approximately 77% of the nearly 108,000 military service members in the current analysis have moved after enrollment in the cohort, of whom two-thirds moved to a different state or country. Of those who moved, 9% went online to change their address. Participants who updated their contact information online were more likely to be women, older, college educated, and officers. The great majority (65%) of those who updated their contact information did so within 2 weeks after receipt of the semiannual postcards (Fig. 1). Participants were much more likely to update their contact information during the 2 weeks after (average = 1.09%) receipt of the semiannual postcards than during the 2 weeks before (average = 0.03%).

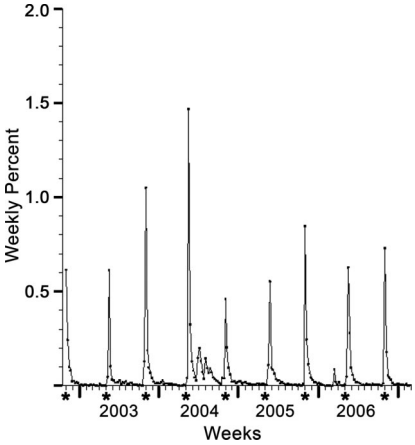

FIGURE 1. Weekly percentage of all participants who updated their contact information on the Millennium Cohort web site, November 2002 to March 2007. Asterisks (*) indicate when postcards were mailed to participants.

The results of this study quantify and confirm that semiannual postcard contact with participants produces a significant increase in the number of persons who update their contact information online compared with the baseline rate when no contact is attempted. In addition, contacting participants on a consistent basis with a personalized message seems to encourage a sense of connectivity with participants and reminds them of the value of their participation.

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An Alternative Quality Adjustor for the Quality Effects Model For Meta-Analysis

To the Editor:

In our recently proposed quality effects model for meta-analysis, we made use of $\hat{\tau}_i$ as a quality adjustor for the *i*th study. Given that N is the number of studies in the analysis, w_i is the inverse variance weight and Q_i is the probability (0–1) that study i is credible, then $\hat{\tau}_i$ was defined as[1]:

$$\hat{\tau}_i = \left(\sum_{i=1}^{N} \tau_i \right) - \tau_i$$

$$\text{where } \tau_i = \frac{w_i - (w_i \times Q_i)}{N - 1}$$

This adjustor redistributed the weight removed from each study equally to the remaining studies. However, we could also redistribute the weight removed to the other studies proportionate to their quality. In this case, the total value of the redistributed weight is the same, but the individual studies receive a slightly different amount based on their quality as follows:

$$\hat{\tau}_i = \left(\sum_{i=1}^{N} \tau_i \times N \times \frac{Q_i}{\sum_{i=1}^{N} Q_i} \right) - \tau_i$$

The final summary estimate is then given by the same methodology we had previously outlined.[1]

What are the implications of this update? It will not grossly alter the overall estimate in the majority of meta-analyses carried out using this model, so there is a fine line between this and the original adjustor. Nevertheless, using this update might result in less bias due to a quality-effect size discordance when there is extreme heterogeneity of both quality and effect size across the studies included in the meta-analysis. To take an example, we use the meta-analysis example studied by Verhagen et al and apply the quality effects model (QEM) to the 17 studies that report on intravenous thrombolysis.[2] Figure 1 depicts the adjusted individual effect sizes using the original (QEM) and the updated adjustor (QEM2). The pooled effect size was 0.73 (0.6–0.88) and 0.72 (0.59–0.89) using the original and updated adjustor respectively. It is clear, however, that only the Lasierra and Schreiber studies, which had the highest individual (unadjusted) effect sizes and extremes of quality (0.22 and 0.78, respectively) are handled differently by each adjustor. However, as this sort of discordance only affects low precision studies, the pooled effect size remains stable.

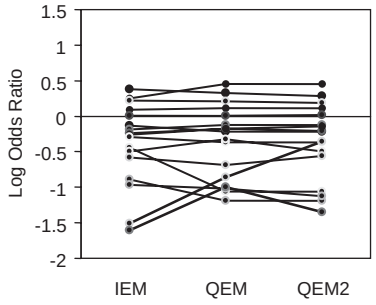

FIGURE 1. Estimation of adjusted individual effect sizes (IEM) using the QEM and QEM2 models with weight-adjusted effect sizes. The 2 discordant studies under QEM2 are those by Lasierra and Schreiber.

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REPORT DOCUMENTATION PAGE

1. Report Date (DD MM YY)
07-03-08

2. Report Type
Letter to the Editor

3. DATES COVERED (from - to)
Apr 2007 – Feb 2008

4. TITLE AND SUBTITLE
Postcards Encourage Participant Updates

6. AUTHORS
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Commanding Officer
Naval Health Research Center
140 Sylvester Road
San Diego, CA 92106-3521

8. SPONSORING/MONITORING AGENCY NAMES(S) AND ADDRESS(ES)
Commanding Officer
Naval Medical Research Center
503 Robert Grant Ave
Silver Spring, MD 20910-7500

Commander
Navy Medicine Support Command
P.O. Box 140
Jacksonville, FL 32213-0140

5a. Contract Number:
5b. Grant Number:
5c. Program Element:
5d. Project Number:
5e. Task Number:
5f. Work Unit Number: 60002

8. PERFORMING ORGANIZATION REPORT NUMBER
Report No. 08-06

10. Sponsor/Monitor's Acronyms(s)
NMRC/NMSC

11. Sponsor/Monitor's Report Number(s)

12 DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES
Published in: Epidemiology, 2009, 20(2), 313-4

14. ABSTRACT (maximum 200 words)

Background: Participant retention is vital to the success of a longitudinal cohort study. Various approaches have been used for retaining participants in longitudinal studies including maintaining up-to-date contact information. Postcards are sent to Millennium Cohort Study participants each Memorial and Veterans Day to honor their military service, thank them for their continued participation, and prompt them to update their contact information.
Methods: Descriptive investigations of the Millennium Cohort Study participants who voluntarily updated their contact information online and had a change of address were completed. The percentage of participants who updated their contact information online of the total number of current participants was graphically displayed. Univariate analyses were completed to temporally compare the volume of updated contact information associated with Memorial and Veterans Day postcards.
Results: Almost 77% of Cohort members moved between 2001 and 2007. Of these, 12% voluntarily updated their contact information online. Of those who updated their contact information online, 65% updated their contact information at least once within 2 weeks of semiannual postcard contact.
Conclusions: Even in times of significant combat deployments, the US military is a highly mobile population. Semiannual appreciatory contact is an effective way to maintain communication with study participants while prompting updates of contact information.

14. SUBJECT TERMS
cohort studies, military personnel, patient participation, epidemiologic methods

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	18a. NAME OF RESPONSIBLE PERSON
a. REPORT	b.ABSTRACT	b. THIS PAGE			Commanding Officer
UNCL	UNCL	UNCL	UNCL	2	18b. TELEPHONE NUMBER (INCLUDING AREA CODE) COMM/DSN: (619) 553-8429